GLOBAL LOGISTICS: DEFINITION OF MAIN CONCEPTS AND ESSENCES

1. Introduction

Global logistics as a modern stage in the periodization of this type of activity is realized on the basis of a certain concept, including economic, organizational, spatial-geographical, technical, technological, personnel, financial, political, moral and ethical aspects and characteristics, as well as factors and driving forces of development.

Clarification of the content and essential features of these positions creates a methodological basis for conducting research and practice of logistics business in new conditions.

The study of the transformation process of traditional logistics into the globalized logistics and essential features of this stage of logistic activity is interdisciplinary; it includes the sphere of a number of branch sciences and, above all, the sciences of globalistics, logistics and philosophy. Information as an object and product of any research is disclosed in certain concepts, scientific categories, terms and definitions. The effectiveness of any scientific research is largely determined by the extent to which the concepts and categories used in it correctly reflect the content, essential attributes of objects and phenomena, are an empirical generalization of a diverse reality in a specific scientific field, are logically interrelated and fixed in definitions. The uncertainty and inaccuracy of the interpretations of the conceptual apparatus can lead to a distorted conception of the essence and cause and effect relationships of the processes and phenomena under study and to unreliable results of the study.

The relevance and practical significance of this article is that it clarifies concepts and suggests definitions that will avoid methodological errors in the study of global logistics problems and in business practice in this field of activity.

2. The object of research and its technological audit

The object of research is the process of logistics globalization as a special type of activity, and the subject – the adequacy of its reflection in the scientific apparatus of research of this process.

The general methodology for identifying the essential features reflected in the categories and concepts of the process of logistics transformation into the global industry is built on the fact that all social relations of all participants and all levels, up to the global level, are manifested through interests. Specific methodology in logistics activity determines the place and role of logistics in the global economy, its imperative dependence on the whole set of world-system relations.

3. The aim and objectives of research

The aim of research is development of a methodological approach to scientific understanding and practical implementation of the process of transformation of traditional logistics into a globalized industry.

To achieve this aim, it is necessary to solve the following tasks:
1. To analyze the semantic dimension of the conceptual apparatus used in global logistics studies for reflection in the basic concepts and formulated definitions of the essential features of the designated processes and phenomena.

2. To designate the imperative dependence of the logistics globalization on the globalized world – the economy, to reveal the content, essence and functional roles of the factors and driving forces of this process.

3. To formulate definitions of the term «global logistics» and the notion «the essence of global logistics».

4. Based on the results of the studies identified in 2 and 3, to offer a methodological approach to the formation of a methodology for effective research and practical activities in the field of global logistics.

4. Research of existing solutions of the problem

A fundamental study of the impact of the globalization of the world economy on a modern, globalized market of logistics services was conducted by German students. Within the framework of the non-profit international association for transport logistics BVL International, a methodology for studying trends in the logistics services market was developed and a survey of 1757 expert organizations was conducted.

The study showed that to provide an advantage in the market today, the provider needs to consider the following factors (as decreasing importance): the requirements of customers (producers) for providing special (new) services – (22 %); timely delivery – (17 %); environmentally friendly delivery – (15 %); time of delivery – (12 %); change in delivery technology – (11 %); corporate social responsibility – (10 %); delivery cost – (7.5 %); quality of logistic services – (4.6 %); flexible delivery schedule – (2.9 %) [1].

The provisions outlined in Chapter 5. «Global Logistics» of the textbook «Logistics: an integrated supply chain» [2] are common to many researchers of the problems of logistics globalization. The authors determine the main factors that determine the process of transformation of traditional logistics into a globalized one, consider the existing obstacles along this path, the levels of globalization of logistics operations, and reveal the objective necessity, conditions and organizational and technological content of formation of an integrated logistics supply chain.

At the same time, from a formally logical position, the authors are not always accurate in using certain scientific categories and concepts.

They determine the five main factors of globalization of logistics operations: economic growth; reliance on the logistics chain; regionalization of the market; technological progress and economic deregulation. In their opinion, these factors are driving forces that encourage firms to enter the world market of logistics services and at the same time contribute to this process. At the same time, it is quite rightly argued that the striving for expansion of international operations of companies is striving for growth and survive in a competitive environment [2].

Expanding the role of each factor in logistics globalization, the authors give them the properties of the driving force, but at the same time as the motives for the real behavior of companies designate other positions:

- good return on assets, «capitalization» of the experience of logistics operators, optimization of financial costs;
- the need to develop new markets to support growth;
- the net effect of regionalization due to the reduction of trade duties, the easing of trade restrictions, the introduction of uniform standards for transport documentation and common transportation and freight systems;
- optimization of the satisfaction of consumer preferences by the company;
- increase in the efficiency of companies by deregulating the sphere of finance and transport [2].

Thus, the concepts factor (as a certain essential circumstance) and the driving force (as a motive of the real action of the company) are identified, sometimes used as synonyms in determining their semantic meaning. For example, it is argued that «the main factor» that drives companies to service the world market is «the strive for economic growth and increased profit» [2].

In the branch science in the development of logistics, five stages are usually designated. The present stage is designated as the stage of logistics globalization [2–6].

The work of Professor of Sociology and Global Studies at U. Robinson University of California is devoted to the study of the basic reasons for the globalization of the world economy in general and the globalization of logistics. The author claims that the transition from the world economy to the global means a new era in the development of capitalism – its own survival and satisfaction of its needs through cheap labor, cheap raw materials, as well as new markets. This, in turn, causes the expansion of goods movement, makes new requirements for logistics services [3].

At the same time, in [4–11], the main categories of global logistics are unjustifiably arbitrarily used. The concepts of «globalization» and «internationalization», «integration and internationalization» are used as synonyms Many authors combine concepts and phenomena that have different essential signs or factors, or driving forces, or barriers to logistics globalization into a single classification structure [4, 5, 7, 11–13]. Sometimes there is a simplified view of the role and function of logistics in the structure of social reproduction and the impact of globalization on these positions [4–7, 9–11, 13, 14].

Unfortunately, most publications on this topic do not define and formulate the essence of global logistics as a scientific category. Reproducing word to word in a number of works [4, 5, 9, 11, 13, 14] definition of the term «global logistics» raises significant comments.

5. Methods of research

This research is based on the analysis of a significant array of scientific publications, systematization, the author's assessment of presented various scientific positions, the formulation of their own definitions and the logic of proof of their validity.

6. Research results

Globalization as a qualitatively new stage in the development of the world economy has its origins in the
The concept of «globalism» has an objective and subjective content. From objective positions — this is a single world space, created by the market civilization of exchange. From the subjective side, globalism means the consistent removal of all local interests, norms and traditions, the formation of a world of economic and political monopoly with the international center of power.

The concept of «globalization» also has two aspects. On the one hand, globalization is an objective process, the content of which is the growing interconnection and interdependence of national economies, national political and social systems, national cultures, as well as human and environmental interactions. The basis of globalization is the development of world markets for goods, services, labor and capital.

On the other hand, globalization is an invisible irresistible force that imperatively subjects entering into relations on the world economic space to realize their interests, to observe the established common technological, economic, legal, socio-political relations, norms and requirements.

This significant feature of modern globalization delimits the concepts of «integration», «internationalization» and «globalization».

The essence of the integration process is internationalization, transnationalization and the universalization of economic activity. The concepts of «integration» and «internationalization» are correlated as general and particular.

The internationalization of economic life is manifested in the intensification of production interdependence, the growth of international commodity turnover, the movement of capital and labor, mutual influence on the most important economic processes in countries, including price dynamics, interest rates, etc. It is based on the international division of labor and creation of Transnational corporations (TNCs).

The main motivations for the internationalization of economic activity are:

- reduction of the share of fixed costs in the production cost due to the increase in the scale of production;
- improvement of the production process;
- interaction with scientific and technical centers, which contributes to advanced technology update;
- reduction of labor costs;
- accessibility to raw materials and capital;
- striving for approach consumption;
- differences in the legislation of different countries that create conditions for obtaining various benefits (tax incentives, offshore zones, subsidies, etc.);
- prestige.

Being the prerequisite for the development of the integration process, internationalization in its turn gets acceleration within the framework of integration associations of countries. Their relations presuppose voluntariness, mutual benefit, non-interference in each other’s internal affairs. At the turn of the century the process of regional integration was sharply intensified. For today in the world there are about 20 international associations of integrative type, covering the main regions and continents of the globe. The countries included in them have almost 2/3 of the world’s GDP and the bulk of international trade and international capital flows.

Globalization is a qualitatively new level of the internationalization of world economic ties. It significantly enhances the interdependence of economies, forms global commodity and financial markets, the global information space and logistics networks, and tightens competition. The world economic space is increasingly engaged in transnational companies.

From the position of logistics development, the global expansion of the geography of its market space, firstly, includes in the struggle for the client numerous national and regional logistics structures; secondly, it also adds political, legal, civilizational and cultural positions to the economic factors influencing the efficiency of logistical support; third, it increases the probability, degree and diversity of business risks.

All this compels the subjects of the logistics services market to constantly analyze the situation, determine the strategy of their company, and promptly make tactical decisions on emerging issues.

In a number of designated publications referring to the same source [16], the following definition of global logistics is given:

«The term» global logistics «refers to the strategy and tactics of creating, as a rule, stable macrological systems linking business structures of different countries of the world on the basis of the labor division, partnership and cooperation in the form of treaties, agreements, general plans supported at the interstate level».

It seems that such formulation does not give an idea of the essential features that distinguish global logistics from the general definition of the term «logistics».

The strategy and tactics of creation of the stable macroscopic systems is not the essential content of the logistical process, but is a tool that ensures its transformation to a new stage — globalized. Nothing significant about understanding the global nature of logistics is added by words about the labor division, partnership and cooperation in the form of treaties maintained at the interstate level.

In the textbook «Logistics» [17] another definition of the term «global logistics» is given:

«Global logistics is a set of interrelated functions for managing the material flow in international trade. Global logistics involves the development of a strategy and tactics for creation of sustainable macrological systems linking business structures of different countries of the world on the basis of labor division, agreements, general plans supported at the interstate level».

The appearance of the term «global logistics» reflects the growing trend in the world economy, which is characterized by the movement of entrepreneurial activity from its specialization in individual countries and regions to a multi-organized world market economy.

The main tasks of global logistics are the formation, management and optimization of material flows at the level of macro-regional economic structures».

In this case, to the above formulation of the term «global logistics», new theses have been added, which in no way reflect the essence and content of global logistics.

The concept of «a set of interrelated functions for the management of material flows in international trade» does
not exhaust the content of logistics as an economic activity and, moreover, can’t be regarded as an essential distinctive feature of global logistics.

It is illogical to argue that «global logistics» reflects a growing trend in the global economy, «since the term of one particular concept can’t a priori reflect the essential signs of another concept.

The author defines the main challenges of global logistics as the formation and optimization of material flow at the level of macro-regional economic structures and their management, thereby reducing the operational field of logistics activities to a «macro-regional» and deprived of its most important distinguishing feature – globalisation. This research allows to give the following definition of the concept of «global logistics»:

Global logistics is a new stage in the development of logistics activities, responding to the imperative challenges of globalization to the effectiveness of the reproductive process (production, distribution, exchange and consumption) through the creation and development of global interstate transport-logistic, distribution and other macro-logistical systems, an integrated network of regional distribution logistics centers forming respective transport and telecommunications infrastructures, effective mechanism for logistics flow control.

6.1. The essence of global logistics. A number of monographs, sections in textbooks, dissertational studies and scientific publications are devoted to the problem of the global aspect of logistics. At the same time, the essence of global logistics as a concept is not formulated even in those works where the consideration of the essential features of this phenomenon is indicated [12, 13, 17–22].

The essence of the subject and process shows the way of its formation, functioning and development. Logistics is a complex, versatile and diverse kind of activity. The system of established and implemented logistical and related relations includes economic, scientific, technical, technological, social, political and legal aspects. Therefore, the essence of global logistics should be considered as a unity of interrelated parties and essential features.

Global logistics as a system of economic relations covers all phases of the process of world public reproduction. The basis of these relations is the relationship of ownership of the means of production. Motive of economic activity is the profit received by the owner. In the context of the globalization of the world economy, logistics is the most important means of reducing the costs of all types of resources, both in the sphere of production itself and in the sphere of circulation, and, therefore, in obtaining greater profits and ensuring business competitiveness.

Thus, the economic essence of global logistics is in realization of the goals and strategies of the subjects of logistics services market, in which their interests manifest themselves.

The technological essence of global logistics lies in reducing the operating costs of working time, the duration of the production cycle and the timing of the supply of goods and, of course, material costs. Global logistics is becoming an important strategic tool in providing competitive advantages in the global market for the sale of products.

The scientific and technical essence of global logistics lies in the fact that it is implemented on the basis of IT management technologies in the areas of production and circulation of goods through the optimization of information flows, as well as the timely provision of complete and reliable information to its customers.

The social and political essential sign of global logistics is manifested in the improvement of services, the removal of customs, tariff, tax and other barriers to the flow of goods, services, capital and labor. This, in turn, helps to strengthen the stability of intercivilizational and interstate relations, more complete and qualitative satisfaction of consumer demand, the formation of modern competences of human capital of national communities and specific organizations.

Having considered the essential features of various aspects of logistics activities in the macroeconomic area, we come to the conclusion that the essential foundation of global logistics determines globalization of relations of international participants, the economic activity which is the subject of logistics management.

The essence of the global logistics as a special kind of activity, in our view, is to ensure the optimal use of all resources interacting on a single world-market space of the subjects of different national economies and transnational companies and the growth of their efficiency through the creation and use of international macrologistical systems and centers, transport and telecommunication infrastructure, a favorable international legal, customs and tax regulation of logistic flows.

6.2. Factors and driving forces of logistics globalization. The analysis of identified in the article and other scientific publications confirms that today there is no unity of opinion in the interpretation of the concepts of «factors» and «driving forces» of logistics globalization. They are often used as synonyms. In the dissertation study [4] the concept of «driving factors» of the globalization of transport and logistics systems in the global economy is proposed.

From the standpoint of the law of unity and struggle of opposites, understanding of contradiction as a source of self-movement, the fundamental principle of the development of any phenomenon and process, it can be asserted that both concepts include the same essential feature – the ability to influence the change of reality.

Indeed, economic contradiction is an essential, natural relation and interaction between the opposite sides of an economic phenomenon or process. In connection with the fact that all spheres of the reproduction process are in interconnection and interdependence, a contradiction also arises between the elements of the system of world economic relations. At the same time, circumstances (factors) are formed, which act as the primary cause of the development process for another, related to the previous object.

At the same time, considering the development process as a set of sequential interrelated actions, it is not difficult to understand that the factors and driving forces as the elements conditioning it have different significant features, and their functional role in the overall process is also different.

As an objective reason for generating the necessary changes in reality, there is a certain factor (factors), that is, a concrete essential circumstance in any phenomenon, process as their initial component. This significant circumstance is also contradictory.

The resolution of internal and external contradictions in the circumstance (factor) also has the ability to influence development, both the factor itself and the development of phenomena and processes, the changes (development, transformation) of which is determined by this factor.
One and the same circumstance at the stages of the origin, deployment and resolution of a contradiction can be in different cause and effect positions with other elements of the development process, changing places with them and functionally acting as a factor and driving force of this process.

The factor, as a newly formed circumstance, induces the subject of the activity to make a decision on making changes in its practice. In this regard, the factor can be regarded as an informational driving force of development. A person’s awareness of the objective imperative necessity of bringing practice into line with new circumstances forms its need (interest) in specific actions to realize this need. It is the need (interest) that is the real driving force of concrete actions to ensure development.

Thus, the factor is an argument, an imperative requirement, a necessary condition for the emergence of the immediate driving force of development. Direct development as a social process has such mandatory attributes as purposefulness, regularity, irreversibility, which it is assigned to the subjects of activity and then implemented through concrete actions.

Such understanding of the categories of «development» limits the possibility of recognizing the newly formed circumstances (factors) as the immediate driving forces for development of processes and phenomena. At the same time, it should be emphasized that factors are the original functional elements in the development process. They act as impulses, sources of information for stakeholders, form their needs, that is, the driving forces of concrete actions to develop their practice.

Factors in the development of logistics (transforming it into a globalized state) are a reflection of the significant changes in the external and internal spheres of logistic activity. Factors are the source of information that contradictions have emerged in the system of economic, organizational, technical, technological, legal and other relations that are being implemented in practice, for the resolution of which specific actions of the subjects of these relations are needed.

The source of self-movement and transformation of logistics into a global system, in its most general form, is the contradiction between the possibilities of managing supply chains within the competence of classical (and even regionally integrated) logistics and the needs of a globalized world economy in logistics.

So, the geographical expansion of the logistics field of activity is associated with a number of external factors. Determining among them are: the growth of global volumes of goods movement; expansion of IT-technologies and communication facilities; regionalization; deregulation of the sphere of international relations; concentration of efforts and interaction of political actors at the global level.

The most important internal factor of logistics globalization is laid in the essential basis of the object of its activity – a service. Logistic service as a commodity has the ability, on the one hand, to ensure profit by the provider, on the other hand, reducing the costs of customers of all types of business processes, integrated into the supply chain (design and production, transportation, sales, services, procurement, distribution, resource management, supporting functions).

The globalization of world economic relations forms new expectations and requirements of customers for the logistics of all components of the reproduction process from sources of raw materials to end users. This is due to the increased volatility of a number of components that affect the efficiency of their activities (labor costs, energy carriers, reduction of the temporary stages of the life cycle of the production cycle, restrictions on distribution networks of transnational corporations, delivery time, etc.) and services (removal by many countries of trade, customs, transport, financial, political restrictions).

The globalization of the world-economy makes competition in commodity markets. Customers-producers of goods in the struggle for the buyer represent various benefits. For example, if earlier the buyer had the right to change the loading order with a 10-day notice, now 50 percent of sellers give the right to change loading orders the day before the dispatch or even later. Accordingly, the conditions for the work of providers become more complicated.

In connection with the development of new forms of trade, in particular, Internet commerce, logistics companies have a need to integrate their processes and systems both vertically and horizontally, improve coordination, and increase the level of mutual trust.

The expectation of customers as a factor in the impact on the world market of logistics services compels providers to increase the level of logistics services from 3PL (complex logistics outsourcing) to 4PL (integrated logistics outsourcing) and 5PL («virtual» logistics).

Thus, in the system of business relations of logistics the contradictions which produce changes in all its spheres are laid. Logistics grows into a globalized structure.

7. SWOT analysis of research results

Strengths. Understanding the essence of globalization logistics as an imperative consequence of the globalization of the world – the economy promotes the development of scientific research in this field of activity and the activation of targeted actions of its subjects to implement positive transformations of the logistics market. This, in turn, ensures an increase in the efficiency and competitiveness of the business of both providers and consumers of logistics services.

Weaknesses. The effectiveness of research of this process depends on the subjective attitude of researchers to the proposed interpretation of the concepts and definitions of global logistics.

Opportunities. The study of the essential signs of factors and the driving forces of logistics globalization should also be supplemented by an analysis of the tools used to identify barriers to this process (price and information policies of large companies, state barriers in the form of tax, customs, trade policy, distribution of goods of firms from other countries etc.)

Threats. The possible emergence of difficulties with bringing the author's position to interested researchers and practitioners of globalized logistics.

8. Conclusions

1. Analysis of the scientific apparatus used in publications on the problems of global logistics shows that the categories of globalistics science are not always adequately interpreted in studies of the current stage of development
of logistics, which in turn affects their scientific validity and practical significance.

2. Reproducing word to word the same definition of the term «global logistics» in different works, in which its essential features are not disclosed, confirms the urgency of further serious scientific research in this field.

3. The definitions of the term «global logistics» formulated by the author and the notion «the essence of global logistics», the interpretation of the content and functions of the factors and driving forces of the process of logistics transformation into the globalized sphere of activity can be considered as megadata disclosing information about the essential characteristics and properties of these phenomena that is allow to correctly identify them and use in scientific research and practical activities.

4. In studies of transformation process of the traditional logistics into globalized logistics, it seems expedient to start from the following methodological approach:

a) the globalization of the sphere of logistics services is the result of the imperative impact of the objective invisible, irresistible force of the globalization of the world economy;

b) the factors of logistics globalization (as objective, new, significant circumstances) and the driving forces of this process (as an instrument of influence on the subject of activity) affect the formation and globalization of the logistics market;

c) factors and driving forces of logistics globalization perform different functional roles in this process:
   – the factor is the primary cause and source of information for the decision of the subject to make changes in their traditional practice;
   – the driving force is a particular need (interest) of the subject, which motivates its practical actions to develop its activities.

References


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